UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
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ART UNIT	PAPER NUMBER
2665	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
	09/775,238	MACLEAN, IAN B.
Office Action Summary	Examiner	Art Unit	
	Daniel J. Ryman	2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>03 February 2006</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>3-7,9,10,12-21,23-25 and 27-33</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>3-7,9,10,12-21,23-25 and 27-33</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments with respect to claims 4-6, 13-16, 18-21, 23-25, and 28 have been

considered but are moot in view of the new ground(s) of rejection.

2.   Applicant's arguments filed 3 February 2006 have been fully considered regarding claims

3, 7, 9, 10, 12, 17, and 27 but they are not persuasive. On page 9 of the Response, Applicant

asserts that "a *prima facie* case of obviousness has not been established with respect to claim 3

for at least the reason that no motivation or suggestion existed to combine the teachings of the

cited references." Examiner, respectfully, disagrees. The examiner recognizes that obviousness

can only be established by combining or modifying the teachings of the prior art to produce the

claimed invention where there is some teaching, suggestion, or motivation to do so found either

in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958

F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Inoue teaches a system that performs

network address translation (NAT) (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16). Rao

teaches, in a packet communication system using network address translation (NAT), that "some

applications embed addressing information in their message payload data" in order to "initialize

or set up a communication session with another application" where "[t]his embedded addressing

information is also to be translated when the packet is crossing a boundary" (col. 1, lines 45-48

and col. 4, lines 1-6). Therefore, one of ordinary skill in the art at the time of the invention would

have been motivated to combine the teachings of Inoue and Rao in order to allow applications in

Inoue's system to communicate between the disparate addressing systems.

3.   In view of the foregoing, Examiner maintains that there was a suggestion for embedding

a private network address into a payload portion where the private network address is translated.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

5.   Claims 3, 7, 9, 10, 12, 17, and 27 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Inoue et al. (USPN 6,515,974), of record, in view of Rao (USPN 6,535,511),

of record.

6.   Regarding claims 3, 9, and 10, Inoue discloses a method of communications between first

and second wireless networks, comprising receiving a first data packet having a header and a

payload portion, the header of the first data packet containing a private network address of a first

node in the first wireless network (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16) where it is

implicit that the IP packet will have a header and a payload portion; translating, by a network

address translator, the private network address in the header to a public network address (Figs. 2

and 3 and col. 9, line 35-col. 10, line 16); and sending a second data packet containing the public

network address translated from the private network address to a second node in the second

wireless network (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16).

Inoue does not expressly disclose that the payload portion contains the private network

address or translating the private network address in each of the header and payload portion to a

public network address. Rao teaches, in a packet communication system using network address

translation (NAT), that "some applications embed addressing information in their message payload data" in order to "initialize or set up a communication session with another application" where "[t]his embedded addressing information is also to be translated when the packet is crossing a boundary" (col. 1, lines 45-48 and col. 4, lines 1-6). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have a private network address in the payload portion and to translate the private network address in each of the header and payload portion to a public network address in order to permit communication between applications existing in disparate addressing systems.

7.   Regarding claim 7, Inoue in view of Rao discloses determining whether to establish a data session (determine translation information for a data session and then pass a translated packet to the appropriate network) on a packet data network on behalf of a roaming mobile station through the first wireless network or the second wireless network (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16) where when the relay receives a packet for which it does not have address information, the relay will determine the translation information and then pass the packet to the appropriate network after having translated the packet (col. 11, line 58-col. 12, line 22).

8.   Regarding claims 12 and 27, Inoue in view of Rao discloses that translating the private network address in the payload portion of the first packet is performed by identifying a string in the payload portion of the first packet containing the private network address (Rao: col. 4, lines 9-19 and col. 4, lines 60-67).

9.   Regarding claim 17, Inoue in view of Rao discloses that the system receives the first packet from the first wireless network associated with a first network operator and sends the second packet to a node in a second wireless network associated with a second network operator

(Inoue: col. 3, lines 1-15 and col. 4, lines 29-37) where the private address space is operated by a

large organization that uses a different addressing configuration than the public internet or

another large organization.

10.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (USPN

6,515,974), of record, in view of Leung (USPN 6,195,705), of record, in further view of Rao

(USPN 6,535,511), of record.

11.   Regarding claim 4, Inoue discloses a method of communications between first and

second wireless networks, comprising: receiving a first Internet Protocol (IP) packet having a

payload portion (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16) where it is implicit that the IP

packet will have a header and a payload portion, the IP packet having a header containing a

private network address of a first node in the first wireless network (Figs. 2 and 3 and col. 9, line

35-col. 10, line 16), where it is implicit that the IP packet will have a header and a payload

portion; translating the private network address in the header portion to a public network address

(Figs. 2 and 3 and col. 9, line 35-col. 10, line 16); and sending a second IP packet having a

header and payload portion to a second node in the second wireless network (Figs. 2 and 3 and

col. 9, line 35-col. 10, line 16), the header portion of the second IP packet containing the public

network address translated from the private network address (Figs. 2 and 3 and col. 9, line 35-

col. 10, line 16).

        Inoue does not expressly disclose that the first Internet Protocol (IP) packet has a payload

portion containing a General packet radio service Tunneling Protocol (GTP) data unit, the GTP

data unit in the payload portion of the IP packet containing the private network address of the

first node. Leung teaches, wireless communication system, that the GPRS Tunneling Protocol

(GTP) is well known in the art (col. 12, lines 21-32) where Examiner takes official notice that it is well known in tunneling to encapsulate a packet in a payload portion of another packet such that the encapsulated packet retains its header including the addresses. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a first IP packet have a payload containing a GTP data unit, the GTP data unit containing the private network address of the first node since the GTP protocol is a well-known protocol.

Inoue in view of Leung does not expressly disclose translating the private network address in each of the header and payload portion to a public network address. Rao teaches, in a packet communication system using network address translation (NAT), that "some applications embed addressing information in their message payload data" in order to "initialize or set up a communication session with another application" where "[t]his embedded addressing information is also to be translated when the packet is crossing a boundary" (col. 1, lines 45-48 and col. 4, lines 1-6). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have a private network address in the payload portion and to translate the private network address in each of the header and payload portion to a public network address in order to permit communication between applications existing in disparate addressing systems.

12.   Claims 5, 6, 13-16, 18-21, 23-25, 28, 29, and 31-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al. (USPN 6,515,974), of record, in view of Rao (USPN 6,535,511), of record, in further view of Chuah (USPN 6,839,339), of record.

13.   Regarding claims 5, 18, 19, 24, and 25, Inoue discloses a method of communications between first and second wireless networks, comprising receiving a first Internet Protocol data

packet having a header and a payload portion, the header of the first data packet containing a

private network address of a first node in the first wireless network (Figs. 2 and 3 and col. 9, line

35-col. 10, line 16) where it is implicit that the IP packet will have a header and a payload

portion; translating, by a network address translator, the private network address in the header to

a public network address (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16); and sending a second

IP packet containing the public network address translated from the private network address to a

second node in the second wireless network (Figs. 2 and 3 and col. 9, line 35-col. 10, line 16).

Inoue does not expressly disclose that the payload portion contains the private network

address or translating the private network address in each of the header and payload portion to a

public network address. Rao teaches, in a packet communication system using network address

translation (NAT), that "some applications embed addressing information in their message

payload data" in order to "initialize or set up a communication session with another application"

where "[t]his embedded addressing information is also to be translated when the packet is

crossing a boundary" (col. 1, lines 45-48 and col. 4, lines 1-6). Therefore it would have been

obvious to one of ordinary skill in the art at the time of the invention to have a private network

address in the payload portion and to translate the private network address in each of the header

and payload portion to a public network address in order to permit communication between

applications existing in disparate addressing systems.

Inoue in view of Rao does not expressly disclose that the first and second nodes are

GPRS support nodes. Chuah teaches, in a wireless communication system, that SGSNs and

GGSNs are a well-known component of a core network used to communicate information

between a radio network and a backbone network (Fig. 2 and col. 2, lines 45-57). Therefore, it

would have been obvious to one of ordinary skill in the art at the time of the invention to have

the first and second nodes be GPRS support nodes since SGSNs and GGSNs are a well-known

component of core network of a wireless network.

14.   Regarding claim 6, Inoue in view of Rao in further view of Chuah suggests that receiving

the first IP packet containing the private network address of the first GPRS support node

comprises receiving the first IP packet containing the private network address of a Serving GPRS

Support Node, and wherein sending the second IP packet to the second GPRS support node

comprises sending the second IP packet to a Gateway GPRS Support Node (Inoue: Fig. 3 and

Chuah: Fig. 2) where each radio network in Inoue will have a GGSN, as seen in Chauh, such that

transmission from one node on one network to a second node on a second network will result in

the packet traveling through the SGSN of the one network and the GGSN of the second network.

15.   Regarding claims 13 and 23, Inoue in view of Rao does not expressly disclose that the

first packet has a payload portion containing a General Packet Radio Service Tunneling Protocol

(GTP) data, the GTP data containing the private network address. Chuah teaches, in a wireless

communication system, that it is well known to have a packet contain a GTP data unit (Fig. 1) in

order to permit communication between RNCs, SGSNs, and GGSNs (Fig. 7). Therefore it would

have been obvious to one of ordinary skill in the art at the time of the invention to have the first

packet contain a GTP data unit in the payload portion of the data packet, the GTP data containing

the private network addess, since this is a well-known way to communicate between RNCs,

SGSNs, and GGSNs.

16.   Regarding claim 14, Inoue in view of Rao does not expressly disclose receiving the first

packet from a Serving General packet radio service Support Node (SGSN) in the first wireless

network, the first node comprising the General Packet Radio Service support node (GGSN).

Chuah teaches, in a wireless communication system, that SGSNs and GGSNs are a well-known

component of a core network used to communicate information between a radio network and a

backbone network (Fig. 2 and col. 2, lines 45-57). Therefore, it would have been obvious to one

of ordinary skill in the art at the time of the invention to receive data from a SGSN by a GGSN

since SGSNs and GGSNs are a well-known component of core network of a wireless network.

17.   Regarding claim 15, Inoue in view of Rao in further view of Chuah suggests sending the

second packet to a GGSN in a second wireless network (Inoue: Fig. 3 and Chuah: Fig. 2) where

each radio network in Inoue will have a GGSN, as seen in Chauh, such that transmission from

one node on one network to a second node on a second network will result in the packet traveling

from the SGSN to the GGSN of the one network and from the GGSN of the one network to the

GGSN of the second network.

18.   Regarding claim 16, Inoue in view of Rao in further view of Chuah suggests receiving

the first packet from the SGSN associated with a first public land mobile network (PLMN) and

sending the second packet to the GGSN associated with a second (PLMN) (Inoue: Fig. 3 and

Chuah: Fig. 2) where each radio network in Inoue will have a GGSN, as seen in Chauh, such that

transmission from one node on one network to a second node on a second network will result in

the packet traveling from the SGSN to the GGSN of the one network and from the GGSN of the

one network to the GGSN of the second network.

19.   Regarding claim 20, Inoue in view of Rao in further view of Chuah discloses that the first

wireless network is associated with a first network operator and the second wireless network is

associated with a second network operator (Inoue: col. 3, lines 1-15 and col. 4, lines 29-37)

where the private address space is operated by a large organization that uses a different

addressing configuration than the public internet or another large organization.

20.   Regarding claim 21, Inoue in view of Rao in further view of Chuah discloses that the

interface is adapted to receive the data packet comprising an Internet Protocol packet (Inoue: col.

9, lines 35-38 and col. 10, lines 6-16).

21.   Regarding claim 28, Inoue in view of Rao in further view of Chuah discloses that

translating the private network address in the payload portion of the data packet is performed by

identifying a string in the payload portion containing the private network address (Rao: col. 4,

lines 9-19 and col. 4, lines 60-67).

22.   Regarding claims 29 and 31, Inoue in view of Rao does not expressly disclose that

receiving the first data packet comprises receiving the first data packet having the payload

portion that contains a Packet Data Protocol (PDP) Context Create request, the PDP Context

Create request containing the private network address of the first node. Chuah teaches, in a

wireless communication system, using a PDP Context Create request in order to signal between

network elements in a GTP system (Fig. 6 and col. 4, lines 16-58). Therefore, it would have been

obvious one of ordinary skill in the art at the time of the invention to have receiving the first data

packet comprise receiving the first data packet having the payload portion that contains a Packet

Data Protocol (PDP) Context Create request, the PDP Context Create request containing the

private network address of the first node, since the PDP Context Create request is a well known

signal in a GTP system.

23.   Regarding claims 32 and 33, Inoue in view of Rao in further view of Chuah discloses that

the payload portion of the first IP packet contains a Packet Data Protocol (PDP) Context Create

request, the PDP Context Create request containing the private network address of the GPRS

Support node (Chuah: Fig. 6).

24.   Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Inoue et al.

(USPN 6,515,974), of record, in view of Leung (USPN 6,195,705), of record, in further view of

Rao (USPN 6,535,511), of record, as applied to claim 4 above, and further in view of Chuah

(USPN 6,839,339).

25.   Regarding claim 30, Inoue in view of Leung in further view of Rao does not expressly

disclose that receiving the first IP packet containing the GTP data unit comprises receiving the

first IP packet containing the GTP data unit carrying a Packet Data Protocol (PDP) Context

Create request. Chuah teaches, in a wireless communication system, using a PDP Context Create

request in order to signal between network elements in a GTP system (Fig. 6 and col. 4, lines 16-

58). Therefore, it would have been obvious one of ordinary skill in the art at the time of the

invention to have receiving the first IP packet containing the GTP data unit comprises receiving

the first IP packet containing the GTP data unit carrying a Packet Data Protocol (PDP) Context

Create request, since the PDP Context Create request is a well known signal in a GTP system.

Conclusion

26.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The

examiner can normally be reached on Mon.-Fri. 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

<div style="text-align:right">

Daniel J. Ryman
Examiner
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</div>

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